



{In Archive} Fw EPA-HQ Comments on Draft Work Plan for Supplemental FS
for Westlake Landfill OU1

Dan Gravatt to Cheryle Micinski

02/26/2010 12 25 PM

Cc Daniel Wall

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Cheryle,

Got your voicemail on HQ comments on Westlake They did arrive late yesterday - see below
Dan and I had a lengthy call with the PRPs this morning on Region 7 and State comments on the
workplan, we mentioned that the HQ comments had arrived but did not discuss them with the PRPs We
agreed to provide HQ's comments to the PRPs "soon" Dan W talked briefly with Cecilia about some of
HQ's more substantive comments Once you've had a chance to look at them as well, let us know what
you think

Daniel R Gravatt, PG
US EPA Region 7 SUPR / MOKS
901 North 5th Street, Kansas City, KS 66101
Phone (913) 551-7324 Fax (913) 551-7063

----- Forwarded by Dan Gravatt/R7/USEPA/US on 02/26/2010 12 22 PM -----

From Rich Kapuscinski/DC/USEPA/US
To Dan Gravatt/R7/USEPA/US@EPA, Daniel Wall/SUPR/R7/USEPA/US@EPA
Cc Doug Ammon/DC/USEPA/US@EPA
Date 02/25/2010 03 10 PM
Subject EPA-HQ Comments on Draft Work Plan for Supplemental FS for Westlake Landfill OU1

Gentlemen-

Thanks for the opportunity to review the draft Work Plan for the Supplemental Feasibility
Study for Westlake Landfill OU1, which was prepared by EMSI on behalf of the Respondents
Thanks also for the opportunity to view the comments you provided last Friday to the
Respondents on behalf of Region 7 We would be interested, as a team member, in viewing
Missouri's comments also

On behalf of the OSRTI review team, I have attached additional comments that we request
be submitted to the Respondents, pending your review and, if warranted, our discussion In
general, our comments are complementary and supplementary to those Region 7 provided
Our comments are incorporated into the set of comments that Region 7 prepared and are
shown in Track Changes therein

I regret that we did not produce these comments sooner The unanticipated and historic
snowfalls in the DC area during the suggested two-week review period, which led to closure
of the federal government offices in DC for over a week, contributed significantly to this
delay

Rich Kapuscinski



EPA (R7&HQ) Comments on draft FS addendum WP doc

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Superfund

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Paul Rosasco, PE
Engineering Management Support, Inc.
7720 West Jefferson Avenue, Suite 406
Lakewood, Colorado 80235

Dear Mr. Rosasco,

RE: Draft Work Plan for Supplemental Feasibility Study, Radiological-Impacted Material
Excavation Alternatives Analysis, for West Lake Landfill Operable Unit-1, January 28,
2010

The United States Environmental Protection Agency (EPA) has reviewed the subject document, received via electronic mail on January 28, 2010, and provides the following comments:

GENERAL COMMENTS

1. It is anticipated that the final work plan and the final Supplemental Feasibility Study (SFS) will become part of the Administrative Record, which necessitates providing appropriate and sufficient explanations of scientific and engineering concepts and technical rationales that may not be familiar to or readily recognized by the general public. Some of these concepts and rationales are identified below.
2. The intent of the SFS is to provide an objective and appropriately thorough evaluation of excavation as a remedial alternative for disposal areas 1 and 2 in accordance with the National Contingency Plan and in comparison to the remedy selected in the May 2008 Record of Decision (ROD). To fulfill these goals, the work plan and SFS should generally consider a range of reasonable assumptions (e.g., a "reasonable best case" and/or "reasonable expected case," rather than only a "reasonable worst case") about uncertain site conditions (e.g., waste volumes, degree of inter-mixing of radioactive soil with other solid wastes, segregability of wastes) that could have a material impact on the implementability, costs, or duration of the excavation alternative or its potential for impacts to the surrounding community. If the outcome of the alternatives evaluation is similar across a range of reasonable assumptions, then all parties can have greater confidence in the remedy decision.
3. One intent of the "complete rad removal" alternative, if implemented, would be to leave disposal areas 1 and 2 in a condition that would not require additional engineering and institutional controls due to their radiological content, if feasible. Said intent should be acknowledged and reflected in the work plan and the SFS report.

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4. The document typically refers to contaminated areas 1 and 2 as comprising OU-1. Note that the Ford Property should be included as part of OU-1. Formatted: Bullets and Numbering
5. The work plan and SFS should identify, evaluate, and discuss the radiological standards in OSWER Directives 9200.4-18 and 9200.4-25 as relevant and appropriate requirements (RARs) under CERCLA. Among other issues, the discussion and evaluation should consider whether: (i) the radioactive waste materials in disposal areas 1 and 2 are sufficiently similar to uranium mill tailings as to justify use of the radiological standards for sub-surface soil that are specified in OSWER Directive 9200.4-18; (ii) the reasonably expected future exposure scenario for the Site is sufficiently similar to exposure assumptions underlying the standards that apply to uranium mill tailings sites; and (iii) the soil sampling data density is sufficient to apply these standards as average (versus not-to-exceed) concentration values. Formatted: Bullets and Numbering
6. Before we finalize the work plan, we should endeavor to identify a more appropriate term than "complete rad removal" to describe the primary excavation alternative, which recognizes that attainment of the cleanup levels for soil that are specified in OSWER Directive 9200.4-18 would not remove all radioactivity from the landfill. Formatted: Bullets and Numbering
7. The workplan does not acknowledge or consider the possible presence of mixed LLRW (waste that is both radioactive and characteristically hazardous) in the landfill. This issue potentially affects many aspects of the workplan and FS, including but not limited to commercial disposal options, disposal costs, worker safety, manifesting and placarding for transport, and design requirements for the on-site landfill cell. The workplan should explicitly acknowledge this issue and describe how it will be evaluated in the SFS. Formatted: Bullets and Numbering
8. Also describe how asbestos and other contaminants will be addressed. Given the waste material in question, it is likely that asbestos and hazardous wastes will be encountered during excavation. Formatted: Bullets and Numbering
9. The Supplemental Feasibility Study (SFS) should address development of either a Site Security Plan or an Emergency Plan, especially contingencies in regard to methane gas pockets that could present an explosion hazard while excavating. Formatted: Bullets and Numbering
10. No mention was made of a site radiological environmental monitoring program for the purpose of ensuring that the public is protected from off-site releases of radioactive material during implementation of either "complete rad removal" alternative. This should be added to the document, preferably to Section 2.12, Health and Safety Requirements, and would potentially include perimeter air monitoring stations (radon and radioactive particulates, and possibly asbestos), as well as environmental dosimeters. Formatted: Bullets and Numbering
11. No specific mention of the Multi-Agency Radiation Survey & Site Investigation Manual (MARSSIM) was made when discussing the sampling and verification process to demonstrate achievement of the cleanup criteria. Suggest adding a statement that addresses the use of MARSSIM for this process. Formatted: Bullets and Numbering

12. We should consider together whether establishing interim deadlines, milestones, and deliverables would foster timely and efficient completion of the work. In particular, it could prove useful and efficient to meet to discuss and review the key, foundational elements of the SFS -- volume estimates (Section 2.3), the segregation evaluation (Section 2.6), cleanup level evaluations, and a first draft of the introductory sections of the SFS report -- when they are reasonably complete, before any significant effort is expended on the subsequent tasks in the work.

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13. The original FS considered a generic, partial excavation alternative (i.e., one that was not defined by specific cleanup levels for the radionuclides, for example). The SFS should also consider this alternative and should update its evaluation, to the extent that the results of the key, foundational elements of the SFS support the specification (e.g., cleanup levels, volumes) of a practical version of such an alternative, which would meaningfully reduce the need for engineering or institutional controls or duration for institutional controls due to radiological content. For this purpose, site-specific cleanup levels for radionuclides in the landfill that are greater than those specified for soil in OSWER Directive 9200.4-18 can be identified and considered.

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14. The final SFS report should incorporate an updated "principal threat determination" that reflects consideration of waste "toxicity" and, if appropriate, the results of the key, foundational elements of the SFS.

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SPECIFIC SUBSTANTIVE COMMENTS

15. Section 1.0: Include information on the previous FS (and existing ROD) within the introduction. Briefly mention the alternatives that were evaluated in the previous FS.

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16. Section 2.1, page 3, first paragraph: Explain the justification, in accordance with the results of the analysis set forth in General Comment 5, for applying the surface cleanup criterion of 5 pCi/g above background levels for total radium and total thorium to the subsurface layers, rather than 15 pCi/g.

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17. Section 2.1, page 3: For purposes of this evaluation, "complete rad removal" is defined to mean attainment of the cleanup standards in 40 CFR 192 consistent with EPA guidelines on how these standards may be used as ARAR at CERCLA sites. The discussion in this section should reflect the results of the analysis set forth in General Comment 5.

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18. Section 2.1, page 3: Greater justification for the uranium cleanup level should be provided. Explain the justification, in accordance with the results of the analysis set forth in General Comment 5, for applying a cleanup criterion of 50 pCi/g above background levels for total uranium, rather than 5 pCi/g. (For purposes of the SFS, EPA initially suggested the cleanup level for uranium for unrestricted use and unlimited exposure established for the St. Louis FUSRAP sites should be considered for the Westlake site also. The basis for the cleanup level for U-238 in soil of 50 pCi/g above background, calculated using U-238 as a

Deleted: should clarify that these standards generally apply to the cleanup of publicly accessible areas and would not generally be used in the context of removing wastes from a landfill. The intent here is to identify a goal that, if achieved, would result in a landfill that did not need to be managed for its radiological content

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surrogate for total uranium, is described in the Record of Decision for the North St. Louis County Sites, Section 2.8.2, Derivation of Remediation Goals.)

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19. Section 2.1, pages 3-4: The final work plan and SFS report should include a principled scientific explanation regarding why naturally occurring radionuclides (i.e., background concentrations) would not be in equilibrium and should cite where in the RI report the background sampling data are described and documented.

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20. Section 2.1, page 4: In addition to the RI data, the Supplemental FS must also consider data contained in the Radiological Survey of the West Lake Landfill, prepared for the NRC by Radiation Management Corporation, 1982.

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21. Section 2.1, Page 5: Items 4, 5, and 6 seem extremely subjective; for example, can objective criteria be identified for what constitutes a "reliable" equation. If there is a scientifically principled basis for expecting a strong correlation between gamma levels in boreholes and thorium concentrations in soil samples from these boreholes, it should be described in the work plan. If there is a scientific method for developing an equation or correlation between these two data sets, it should be referenced here. Otherwise, EPA recommends that the down-hole gamma values be used in a qualitative manner only, as suggested in bullet 6.

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22. Section 2.1, Page 5: Address whether there is a provision for conducting model verification and validation for the correlation between the downhole gamma values and the laboratory analytical sampling results. Also, address how spatial distributions between the downhole gamma values (reported as peaks per boring) and the samples that were taken at 5-ft intervals are to be correlated.

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23. Section 2.2, Page 6: Although it is not disputed that additional, design-phase investigations likely would need to be performed for any remedy, it is not clear that the total cost of these activities for the excavation alternatives would have a material influence on the evaluation of remedial alternatives. Nor is it clear that a commensurate level of effort was put forth during the original FS to enumerate and estimate the cost of design-phase activities for the containment remedy selected in the May 2008 ROD. The purpose of these activities should be described and justified if this task is retained in the final work plan.

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24. Section 2.2, Page 6: The final work plan should describe further the need, intent, and rationale for "confirmation of RI soil sample results" as a pre-excavation requirement. To the extent that RI sample results warrant "confirmation," the vagaries and uncertainties in the RI data should be acknowledged in the introductory sections of the SFS report.

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25. Section 2.3, page 7: The work plan should clarify what data (other than cost estimates for the pre-design activities identified in Section 2.2) will be "obtained" as part of the work plan that could "... identify the waste materials containing radionuclides ..."

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26. Section 2.3, page 8: To the extent possible, the Supplemental FS should describe the three-dimensional distribution of the radiologically contaminated soil within the overall waste

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mass to be excavated. This information will directly affect the soil/waste segregation evaluation proposed in Section 2.6.

27. Section 2.3: Add an appropriate reference for the AutoCAD Civil 3D 2010 software in the list of references. The final work plan should also verify and document that the selected tool and assumptions underlying the calculations are appropriate and reasonably accurate for the site-specific circumstances (i.e., when radioactive soil is placed as soil cover, as reported in the RI and corroborated by evidence of layering contained in the 1982 Radiological Survey of the West Lake Landfill, prepared for the USNRC by Radiation Management Corporation).

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28. Section 2.3: There are several references to setting aside overburden waste as non-contaminated material. While this may be a viable method during excavation activities, the disposal and/or disposition of overburden as "contaminated" material should at a minimum, be considered as a "worst case scenario" approach relative to the costs incurred from additional handling, sorting/segregating and staging activities. This could be accomplished in the cost sensitivity analysis.

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29. Section 1, Introduction, fourth paragraph, versus Section 2.3, Page 7: Address the apparent conflict between the statements in these two sections. The Section 1 statement reads, "Additional field investigations or laboratory testing are not included in the scope of this effort and will not be performed." On the other hand, the Section 2.3 statement reads, "The project team will use data obtained in Sections 2.1 and 2.2 to identify the waste materials containing radionuclides above the cleanup levels using three-dimensional orientations within the overall waste mass." The second statement seems to indicate that additional sampling will be conducted as part of the scope of work.

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30. Section 2.4.2: Off-road trucks are suitable to implement on site disposal in a new engineered landfill. On road trucks are required if the waste is transported and disposed off site. If rail transport is used for off site disposal, a transfer facility between the trucks and rail cars will be required.

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31. Section 2.4.4: The text specifically states that "literature will be reviewed and historical experience used to attempt to approximate these bulking and compaction factors, as they will be affect project schedules, costs, and quantities." It appears that this verbiage is only in reference to the on-site disposal option. It should be stated that this phenomenon will also be taken into account for off-site disposal as weight of contaminated material per load will be a factor in off-site disposal costs.

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32. Section 2.4.5: The material handling plan will need to include procedures for identification of the contaminated materials during the excavation process. The contaminated material is not anticipated to be located in simple horizontal layer, but to be interspersed with other wastes.

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33. Section 2.4.6: There are no references to general air monitoring of the area to be utilized as an effective tool for assessing the effectiveness of various dust control methods as well as providing documentation for off-site fugitive emissions.

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34. Section 2.4.9: If off-site disposal is considered, decontamination of trucks prior to leaving the site should be included in the evaluation of the alternative.

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35. Section 2.5: If the intent is to remove individual layers of the contaminated material, the need to get real time validation testing is critical to performing this work in an efficient cost effective manner. The time to get validation results will have a major impact on productivity if excavation must be stopped to get results. Since the material is located in individual layers within the landfill mass, this testing will significantly impact productivity if work must be started and stopped to classify material. Over-excavation of zones will increase material but may be more practical. Impacts and accuracy of the verification program based on the understanding of the deposition of these materials should be addressed.

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36. Section 2.5: The Verification Sampling Plan will most likely require detailed radiological walkover surveys as part of the confirmation sampling process. Consequently, the costs associated with verification sampling should be comprised of more than those costs associated with sampling and analysis of soil samples. The labor of the walkover process should be taken into account when evaluating the cost of Verification Sampling.

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37. Section 2.6: The discussion on segregation pre-supposes that physical separation equipment is essential to achieving adequate segregation of radioactive and non-radioactive wastes. An alternative assumption that warrants consideration, unless it can be shown to be unreasonable based upon site-specific data, is that visual examination, supported by in-field survey instruments, during excavation is adequate for purposes of practically and presumptively distinguishing radioactive soil from municipal solid waste and other waste materials.

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38. Section 2.6: The discussion on limitations/constraints to segregate the waste material will be crucial to the determination of the ability and the productivity achieved in successfully removing this material. The schedule shows 5 days for this evaluation. Is this a sufficient amount of time?

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39. Section 2.7, page 13: The final work plan should describe the use and evaluation of the waste acceptance information to be obtained from potential disposal facilities and should document any assumptions about waste type characterization (e.g., low-level radioactive waste, hazardous and mixed waste) for the excavated materials.

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40. Section 2.7: Special DOT packaging should be considered for rail shipments (e.g. railcar liners with specific closures). Additionally, an exemption from specific packaging requirements also may be required. The cost of packaging per railcar combined with the number of estimated loads should be part of the evaluation process when considering commercial disposal alternatives.

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41. Section 2.7: Permitting restrictions, if any, for hauling contaminated material should be discussed and addressed. Traffic impacts on the local roads and community should be addressed based on the volume of material to be removed.

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If rail transportation is considered, discussions with the railroad should be included to check railroad rules and regulations. Often railroads operate under their own regulatory environment.

42. Section 2.8: The intent of the on-site disposal alternative, if feasible and implemented, would be to take the radioactive wastes out of the floodplain. The floodplain issue is paramount for certain stakeholders. For these reasons, please consider making delineation of the floodplain (Section 2.8.3 in the current draft) an earlier activity in the SFS critical-path schedule. If none of the potential sites for an on-site cell is located outside the floodplain, then we should re-consider whether to pursue further evaluation (e.g., conceptual design) of the on-site disposal alternative.

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43. Section 2.8: If the final SFS includes a discussion of the conceptual design of the on-site cell, then it should be accompanied by a concise description of the Site hydrology and hydrogeology and should address the feasibility of attaining the permeability goal for the clay liner.

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44. Section 2.8.2.2, Page 18, (2-ft vegetative soil layer): Since the USDA soil classification system is designed for chemical, physical, and biological applications or uses, we recommend using the USDA soil classification (mapping unit) or cross referencing it with the USCS material classification to increase the likelihood of identifying appropriate soil types for establishing a dense, healthy vegetative cover.

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45. Include a map of site features and proposed cell locations mentioned in Section 2.8.1.

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46. Section 2.8.1.2: Check siting constraints to determine if proposed new cell locations will violate any MDNR landfill buffer zones or geologic constraints. Discuss whether the new landfill cell would require a new permit from the MDNR.

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47. Section 2.8.1.2, Page 16, Second full paragraph: The last sentence states that owners would not consider termination of their leases. Is there a dollar value associated with the buyout of these existing leases that can be quantified?

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48. Section 2.8.1.3: Include an evaluation of the impact a breach in the levee (during a 500-year flood event) would have on the waste currently on the subject property or on an engineered cell on the border of the floodplain boundary. Would the flood waters reach the elevation of the site under this scenario? What flow rates would be expected on the perimeter of the floodplain? What capacity would the water have to erode or impact earthen structures and wastes on site?

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49. Section 2.8.2.1, page 17: EPA's intent was the reverse of what is stated. The components required by the solid waste regulations should be used only to the extent that they do not compromise the relevant and appropriate UMTRCA requirements including longevity and radon mitigation features. For example, synthetic liners may be used so long as the cell design life requirements are not compromised. **Formatted: Bullets and Numbering**
50. Section 2.8.2.2, 2-ft compacted clay liner, page 18: The thickness sufficient to provide radon attenuation should take into account increased radon generation resulting from ingrowth of radium over the design life of the cell. **Formatted: Bullets and Numbering**
51. Section 2.8.2.3, page 19: Will the proposed leachate collection system be able to prevent punctures of the synthetic liner by the overlying waste? **Formatted: Bullets and Numbering**
52. Section 2.8.3, page 20: It is not clear whether the FS addendum will evaluate all three of the locations proposed in Section 2.8.1.1 for the on-site cell, or just one location. This should be clarified. **Formatted: Bullets and Numbering**
53. Sections 2.8.3, 2.8.6, and 2.9, page 20: These sections will need to include an evaluation of how the on-site disposal cell liner and cap systems will transition into the caps and liners for the surrounding OU1 and OU2 areas. **Formatted: Bullets and Numbering**
54. Section 2.9: The discussion in Section 2.9 seems to indicate that complete removal of the radiological waste from the site may not occur or that there may be significant radiological wastes left on site. If significant radiological wastes are left on site, would the alternative comply with the intent of the complete removal option? **Formatted: Bullets and Numbering**
55. Section 2.9.2, page 21: The final work plan should clarify what is meant by "possible UMTRCA add-ons" and the circumstances under which they might be incorporated into the cap design for disposal areas 1 and 2. **Formatted: Bullets and Numbering**
56. Section 2.11, page 22: The final work plan should clarify (if true) that "short-term" refers to the period of remedy construction/implementation and "long-term" refers to the post-construction/implementation period. The information in Tables 1-3 might be more accessible and understandable to the public if it was expressed in a single table, which would also facilitate a comparison among the alternatives. **Formatted: Bullets and Numbering**
57. Section 2.11, page 22: Where appropriate, and/or where site-specific data is not available, the risk assessments should use EPA Risk Assessment Guidance methods and exposure factors. The risk assessment must consider chemical toxicity and all contaminants of concern, including non-radiological constituents. Incorporate any updates to toxicity factors since the BRA. **Formatted: Bullets and Numbering**
58. Section 2.11, Page 23, 2nd paragraph: Discuss the need to gather meteorological data applicable to the site (likely obtained from Lambert Airport) in order to assess short-term radiological risks. **Formatted: Indent: Left: 0", Hanging: 0.38"**
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59. Section 2.11, Page 23, third paragraph: The final work plan should clarify that remediation workers are the population of concern for potential short-term exposures. When assessing risks to workers posed by radioactivity at Superfund sites, EPA's preference is to use dose directly for comparison to radiation protection standards that are determined to be ARARs. See, for example, the answer to Q24 on page 11 of the on-line CERCLA Risk Assessment Q&A Guidance at <http://www.epa.gov/superfund/health/contaminants/radiation/pdfs/riskqa.pdf>

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60. Section 2.11, page 23: RESRAD is not generally recommended by EPA for evaluating CERCLA response actions.

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61. Section 2.11, page 23: The subsurface pathway for RESRAD differs from EPA's unsaturated zone approaches by a number of features. For example, RESRAD does not calculate the site's water balance or infiltration; although an important input, it is not mentioned here or elsewhere (e.g., page 18 & 19 for cap designs). HYDRUS, a USDA unsaturated zone model, should be considered for this purpose. It has been verified by EPA for use for predicting radionuclide transport and calculating soil cleanup levels and can support risk pathway evaluations. Additional EPA perspectives about sub-surface modeling can be found on-line at <http://www.epa.gov/superfund/health/contaminants/radiation/pdfs/tbd-part-3-clean.pdf> <http://www.epa.gov/ada/download/reports/600R02082/600R02082-full.pdf>

62. Section 2.11, page 23: Site-specific model input parameters are generally preferred. All model inputs should be documented and justified to foster review and evaluation.

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63. Section 2.12: It would be reasonable to assume that less handling/placement is associated with off-site disposal which could mean less short-term exposure to site workers. This should be a consideration when evaluating off-site disposal relative to an on-site disposal cell.

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64. Section 2.12.1, Page 24: Discuss the potential need to consider nearby workers unaffiliated with OU-1 work with regard to dosimetry and air monitoring programs (e.g., those potentially impacted by transportation activities and fugitive dust emissions). This was briefly mentioned in Section 2.4.9 but is not discussed in the Health and Safety Requirements section.

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65. Section 2.12.1, page 24: Routine fecal monitoring is not a standard health physics practice, even in the presence of thorium-230. Monthly urinalysis sampling would be the major component of a bioassay monitoring program for a site contaminated with uranium, radium, and thorium, with fecal analysis utilized only in the event of a suspected intake.

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66. Section 2.12.2, page 25: Air sampling is only briefly mentioned here with regard to determining the need for respiratory protection. However, an air sampling program should be discussed in further detail in this Work Plan to include the possibility of breathing zone, general area, and perimeter monitoring equipment for detection of radioactive particulates

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as well as radon monitoring in support of assessment of radiological doses for site workers and the public.

67. Section 2.12.3: Assume that a Certified Industrial Hygienist should, at a minimum, be available for consultation given the variety of potential hazards that exist at this site. Additionally, the estimate of required Rad Survey Instruments may need to be increased. It currently appears to be underestimated.

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68. Section 2.12.3, page 25: In addition to the team of radiation safety personnel, also need to mention construction safety personnel and possibly industrial hygiene personnel (unless others are cross trained to perform industrial hygiene monitoring).

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69. Section 2.12.3, page 25, Instrument Bullet List: All instrument types would need a backup in the event of malfunction. Suggest increasing the number of GM pancake survey meters.

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70. Section 2.12.3, page 25, Instrument Bullet List: It is likely that more than two sodium iodide (scintillation) detectors would be needed for doing walkovers of the property. Suggest increasing this number.

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71. Section 2.12.3, page 25, Instrument Bullet List: In addition to the survey meters, area radon gas and radon daughter monitors would also be needed in order to assess potential radon dose to site workers.

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72. Section 2.12.3, page 25, Instrument Bullet List: Briefly list air monitoring equipment to be used. "Chemical sniffers" must be better defined.

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73. Section 2.12.4, page 26, 2nd paragraph: Add smears to the list of consumables discussed in this paragraph. In addition, add supplies related to radioactive waste handling (e.g., yellow radioactive trash bags) to the list of consumables discussed in this paragraph.

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74. Section 2.14, page 28: If a critical-path schedule is prepared for the excavation alternative(s), then one should also be prepared for the May 2008 ROD remedy, which would provide a suitable comparison. (A second, budget-constrained schedule for the excavation alternative would seem warranted to accompany the alternative "cash-flow" assumptions identified on page 30.) We recommend that the SFS summarize the detailed schedules with a concise narrative description, rather than rely solely upon the reader's familiarity with the detailed MS project format.

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75. Section 2.15: The final workplan should concisely describe the basis for updating the cost estimates previously prepared for the OU-1 ROD and should briefly explain the basis/rationale for assuming that the schedule could be budget-constrained.

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76. Section 4: We recommend that the final work plan include a proposed outline of the SFS report.

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ADMINISTRATIVE AND EDITORIAL COMMENTS

- | 77. Table of Contents, 2.8.2.1, 2.8.6, and 2.10: Page numbers need to be right justified with the other page numbers. Formatted: Bullets and Numbering
- | 78. Add a List of Acronyms and Abbreviations to the document. Formatted: Bullets and Numbering
- | 79. Page 4, second paragraph: Change the text in question to "...representative background concentrations and the appropriate risk-based remediation concentrations listed in the OSWER directive." Formatted: Bullets and Numbering
- | 80. Section 2.4.6, page 10, line 5: Add the words "of a" between "application" and "daily soil cover". Formatted: Bullets and Numbering
- | 81. Section 2.8, Page 14, 3rd line of opening paragraph: "above the clean levels" should be "above the clean-up levels". Formatted: Bullets and Numbering
- | 82. Section 2.8.1.2, Page 16, Paragraph 3, line 7: The verbiage "and since that time" is unclear. Formatted: Bullets and Numbering
- | 83. Section 2.8.1.2, Page 16, Paragraph 3, line 9: Change "it likely" to "it is likely". Formatted: Bullets and Numbering
- | 84. Section 2.8.2.1, Page 17, Paragraph 3, line 8: Add "MDNR" before "Solid Waste Regulations". Formatted: Bullets and Numbering
- | 85. Section 2.8.1.2, Page 16, 2nd paragraph: Reword the following sentence: "Use of this area would *either* require excavation and relocation of the stockpile soil prior to construction of a new on-site engineered disposal cell." The word "either" suggests a comparison of two activities, but only one appears in the sentence. Formatted: Bullets and Numbering
- | 86. Section 2.8.5, Page 20: Add the word "will" between "Supplemental FS" and "comply". Formatted: Bullets and Numbering
- | 87. Section 2.12.2, Page 24, Line 1: Change "where loose contamination is know" to read "where loose contamination is known". Formatted: Bullets and Numbering
- | 88. Section 2.12.2, Page 25, line 9: Change "contaminates" to "contaminants". Formatted: Bullets and Numbering
- | 89. Section 2.12.2, page 25, line 14: Change "tool" to "tools". Formatted: Bullets and Numbering

A final workplan incorporating these changes must be provided within fifteen (15) days of your receipt of this letter. If you have any questions, you may contact me at 913-551-7710.

Sincerely,

Daniel Wall
Remedial Project Manager
Missouri-Kansas Branch
Superfund Division

cc: Shawn Muenks, MDNR
Rich Kapuscinski, EPA HQ (e-mail only)
Charlotte Neitzel, Holme Roberts & Owen (e-mail only)
Christina Richmond, US DOJ for US DOE (e-mail only)
Mike Hockley, Spencer Fane Britt & Browne
Kate Whitby, Spencer Fane Britt & Browne (e-mail only)
Bill Beck, Lathrop & Gage (e-mail only)

bcc: Cheryle Micinski, CNSL